WE CLAIM AS OUR INVENTION AND DESIRE TO SECURE PROTECTION FOR:

1. A method for analyzing information relative to the time-varying state of a plurality of substances within a subsurface petroleum reservoir, comprising the steps of:

(a) providing data relative to the physical state of at least one fluid within the reservoir;

(b) making at least a portion of said data available for analysis by each of a plurality of computational applications for characterization, by said applications, of traits relating to at least one of :

(1) the location;

(2) the state; and

(3) the volume quantity of the at least one fluid;

(c) performing additional computational analysis on data, (including output data from said plurality of computational applications in step (b), to optimize said characterization of fluid traits;

(d) monitoring change over time in at least one of:

(1) said data;

(2) said characterization, and

(3) characteristics of the optimization of step (c)

to create a historical data profile associated with the characterization of the reservoir data;

(e) storing at least a portion of said data and its associated historical data profile; and

(f) making said data and data profile accessible over a distributed network, whereby persistent availability of said data and characterization-related information for the reservoir is permitted.